Feedback from LBNC on ND DAQ/Software/Computing Presentation

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ND Software Meeting

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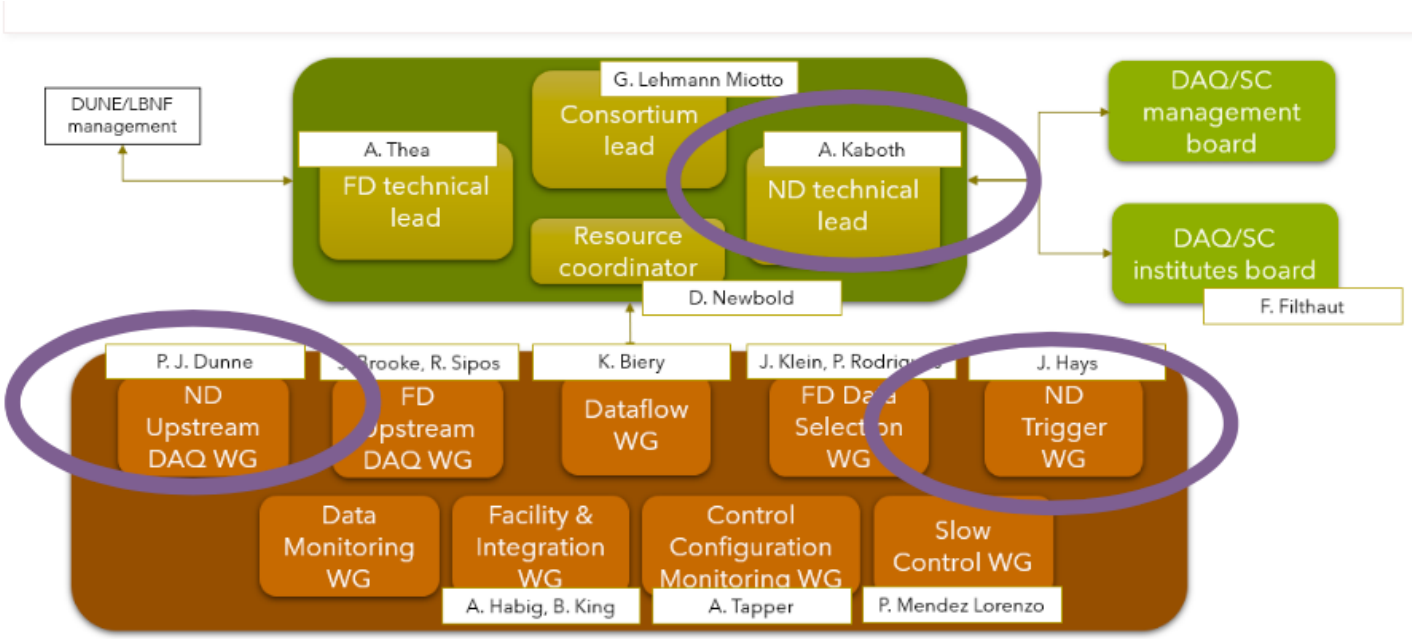
Feedback on DAQ part

- The committee was most interested in the DAQ.
- Joint Near/Far DAQ consortium formed

Org chart shown by G. Lehmann-Miotto, March 1. Purple circles added by Jonathan Hays to show ND roles.

Need review of interface documents. A. Kaboth to be in charge.



What's Shared with FD and What's Different

- Shared with FD
  - Data flow
  - Timing systems
  - DAQ partitioning
  - Slow Control
  - User interface
- Expected customizations needed for ND
  - Low-bandwidth readout unit to use instead of FELIX
  - Data selection and event building algorithms
  - Detector and DAQ configuration
  - Implementation of controlled calibration
  - Accelerator interface

LBNC mentioned some of these in their closeout presentation

Question arose about this

Low-Bandwidth Readout

- May be needed as a cost-effective alternative to FELIX
- FELIX is already cost effective, but requires custom interfaces to front-end electronics
- Many COTS electronics components communicate over Ethernet.
- Run Ethernet cables to switches and hosts for a convenient DAQ system with low bandwidth

- Peak and average bandwidth numbers from Asher removed from talk. LBNC always reminds of Eisenhower's quote on planning. They want specific plans even if we know they are just guesses.

Other Feedback

- Written questions addressing data volume estimates addressed before the meeting.
- Emphasized in the talk that resource needs were preliminary

- Software – I think there was acknowledgment either in the closeout or in the Q&A about how multiple detector design possibilities complicates the software and analysis task
  - multiple SAND tracker options: 3DST, STT, LAr, TPC, ...
  - options for the middle detector: ND-GAr, TMS, ND-GAr-Lite

- We have our own internal feedback about software. Point made about how standalone components are easier to develop but harder to maintain.
- Should get some production requests through. Software is still in development however.